

Abstract

It is a task to provide a magnetic storage device of complementary type, of which reliability is improved by precisely performing writing storage data.

In the present invention, therefore, in a magnetic storage device of complementary type for storing storage data contrary to each other in a first ferromagnetic tunnel junction element and a second ferromagnetic tunnel junction element, respectively, the first ferromagnetic tunnel junction element and the second ferromagnetic tunnel junction element are formed adjacently on a semiconductor substrate, first writing lines is wound around the first ferromagnetic tunnel junction element like a coil and the same time second writing lines is wound around the second ferromagnetic tunnel junction element like a coil, and in addition, a winding direction of the first writing lines and a winding direction of the second writing lines are reversed to each other.